Medical Monitoring Project

Updated November 2011

The Medical Monitoring Project (MMP) is an ongoing, population-based surveillance system that assesses the health-related behaviors, clinical outcomes and needs of HIV-infected adults receiving medical care. MMP is currently conducted in 23 project areas, including Virginia, by local and state public health departments in collaboration with the Centers for Disease Control and Prevention (CDC). Participants are randomly selected from a sample of HIV care facilities within the project area. Data about HIV care experiences and health behaviors are collected through a participant interview and a linked medical record abstraction. During the 2009 data collection cycle, a total of 132 patient interviews and 359 medical record abstractions were conducted in Virginia. Presented here are results of a descriptive analysis of interview data from the 2009 cycle.

CHARACTERISTICS OF PARTICIPANTS

Among the participants, 62% were male, 35% were female, and three percent were transgender. Over half reported their sexual orientation as heterosexual (53%), 36% as homosexual, and nine percent as bisexual. The majority of participants reported their race as Black (63%), followed by White (26%), Hispanic (9%), and other (2%). The median age was 49 years with a range of 21-73 years. Twenty-three percent reported having not completed high school. Fifty-nine percent of participants reported an annual household income of less than $20,000 for 2008, while 26% reported an income between $20,000 and $49,999, and 16% reported an income of $50,000 or more. Ninety-three percent were born in the United States. Five percent reported being incarcerated in jail or prison for longer than 24 hours and ten percent reported a period of homelessness within the last 12 months. Seventy-three percent were diagnosed with HIV more than five years ago, while 27% reported being diagnosed in the last five years.

ACCESS TO HEALTHCARE

While all participants reported having one established place for HIV medical care, only 72% of participants reported having some form of health coverage during the past 12 months. During the same time period, it was estimated that 86% of Virginians statewide had some type of health care coverage (CDC, 2011). Of the participants reporting any form of health care coverage, 24% reported a lapse in coverage during the past 12 months. Of those on antiretroviral medication, 47% relied on the Virginia AIDS Drug Assistance Program (ADAP) to pay for their medications. Within the subgroup of participants who were diagnosed within the last five years, the majority entered HIV care within three months of diagnosis (91%). In the past year, 13% of participants visited an emergency room or urgent care center for HIV medical care, and 9% were admitted to a hospital because of HIV-related illness.

ANTIRETROVIRAL THERAPY AND ADHERENCE

Antiretroviral therapy (ART) is the primary intervention against the progression of HIV in HIV-infected patients. MMP participants in Virginia were asked to report on their history of and adherence to ART. Eighty-nine percent of MMP participants reported currently taking antiretroviral medications (ARVs) and 95% of all participants reported having taken ARVs at some point. The main reason reported for not taking ARVs at the time of interview was that a doctor had advised delaying treatment.

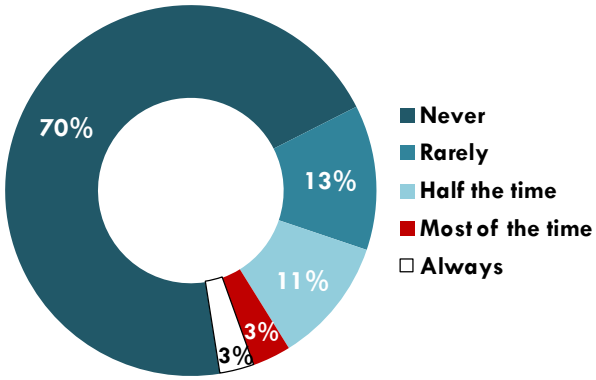
Adherence to ART is a major factor in the success of the ARV regimen. According to the Department of Health and Human Services Health Resources and Services Administration (HRSA), adherence rates near 100% are needed for optimal viral suppression. HRSA reports the average ART adherence in the US is around 70%. HRSA also recommends patient self-report as an effective way to measure ART adherence and suggests that asking about adherence over the last three to

seven days gives an accurate reflection of longer-term adherence (HRSA, 2011). The table below illustrates several indicators of adherence as reported by MMP participants taking ARVs in 2009. Forgetting to take medications was the main reason reported for having missed a dose of ARVs.

ART Adherence Measures	Percent
Missed a dose within the past week	19
Drug holiday in last 12 months	8
Never skip medications	39

Barriers to ART adherence include drug side effects and difficulty following complex regimens or dosing schedules (HRSA, 2011). The chart below depicts participants' self-reported experience of side effects from ART. Side effects were the main reason cited for having taken a drug holiday in the last 12 months.

Percentage Reporting Side Effects from ART in the Past 12 Months, MMP 2009



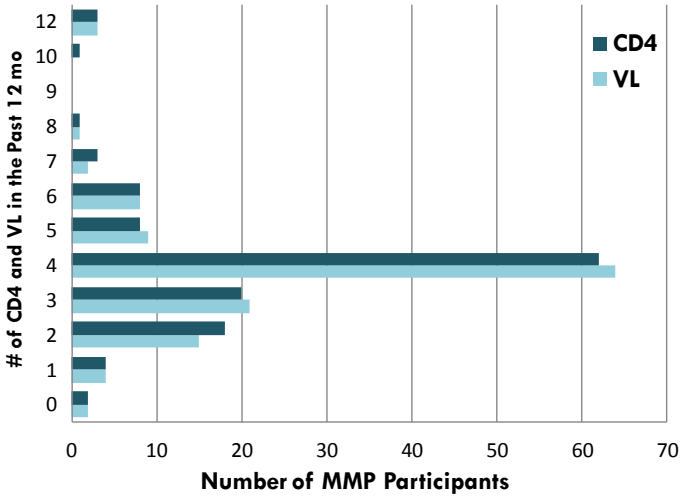
Participants reported on their confidence in being able to comply with their ART regimen, their belief in the efficacy of ARV's, and their own risk of developing resistance. Ninety-one percent of participants currently on ART said that they were either very sure or extremely sure that they would be able to take all or most of their medication as directed. Eighty-eight percent said they were either very sure or extremely sure that their medication would have a positive effect on their health. Additionally, 88% of respondents said that they were either very or extremely sure that if they did not take their medication exactly as instructed, the HIV virus in their bodies would become resistant to HIV medications.

CLINICAL OUTCOMES

The Department of Health and Human Services' Panel on Antiretroviral Guidelines for Adults and Adolescents recommends that CD4 tests and HIV viral load counts be performed every three to six months for HIV positive individuals. In clinically stable patients with consistent viral suppression, CD4 counts may be monitored every six to twelve months (DHHS, 2011). Virginia MMP participants reported a median of four CD4 T-lymphocyte count tests (range = 0-12) in the last 12 months, with two MMP participants (1.5%) reporting that they had not had any CD4 counts in the previous year. For clinically and immunologically stable patients with consistent viral suppression for more than two to three years, viral load counts may be done every six months (DHHS, 2011). The median number of self-reported viral load tests during the past 12 months was also four with a range of 0-12, with six participants (4.5%) reporting that they had less than two viral load counts in the previous year.

Pneumocystis pneumonia (PCP) is an opportunistic infection that occurred in 70-80% of patients with AIDS before the use of antibiotic prophylaxis and ART became widespread (CDC, 2009). Among MMP participants, 14% have been diagnosed with PCP since testing positive for HIV.

Number of CD4 and HIV Viral Load Test during the Previous 12 Months, MMP 2009

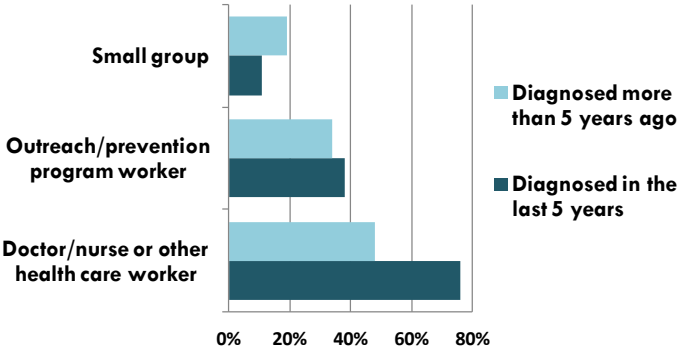


PREVENTION

Sexually transmitted diseases (STDs) increase the risk of HIV transmission by those infected with HIV and increase susceptibility in un-infected individuals. Early detection and treatment of STDs may reduce the risk for STD and HIV transmission. Forty-five percent of MMP participants indicated that they had been tested or examined for an STD within the year prior to the interview. Of the participants who indicated that they had been tested within the last year (n=59), 37% said they had been diagnosed with one or more STDs.

Sixty-two percent of participants reported having at least one formal conversation about HIV and STD prevention with some type of HIV service provider within the previous year. The chart below gives a breakdown of HIV/STD prevention interactions by time since diagnosis.

HIV and STD Prevention Discussions Settings* within the Previous Year, MMP 2009



* Categories are not mutually exclusive

Fifty-one percent of participants reported that they had received free condoms from someone other than a friend, relative, or sex partner within the last year. The majority of participants who received free condoms obtained them from a physician's office (70%).

Hepatitis B (HBV) is the leading cause of liver disease worldwide. The risk factors for HIV and HBV infection are similar and co-infection with HBV and HIV can complicate treatment. It is recommended that all HIV patients be screened for HBV and that previously unexposed patients be vaccinated to prevent HBV infection (CDC, 2009).

Sixty-seven percent of Virginia MMP participants reported ever receiving a hepatitis vaccine. The seasonal influenza vaccine is recommended annually for immune-comprised individuals. Ninety percent of MMP participants said that they had been vaccinated against the flu within the past year; most received their flu vaccines at a physician's office (75%) or a health department clinic (14%).

Data has shown that cervical cancer rates in HIV-infected women are two to three times higher than in non-infected women. The CDC recommends that all HIV infected women annually receive gynecological evaluations including a Pap smear. In 2009, 74% of female participants reported having a pelvic exam and Pap smear within the year prior to the interview. While this was above the HRSA-reported 2006 national average of 71%, it is below the 100% goal recommended by the Institute for Healthcare Improvement (HRSA, 2008).

SUBSTANCE USE

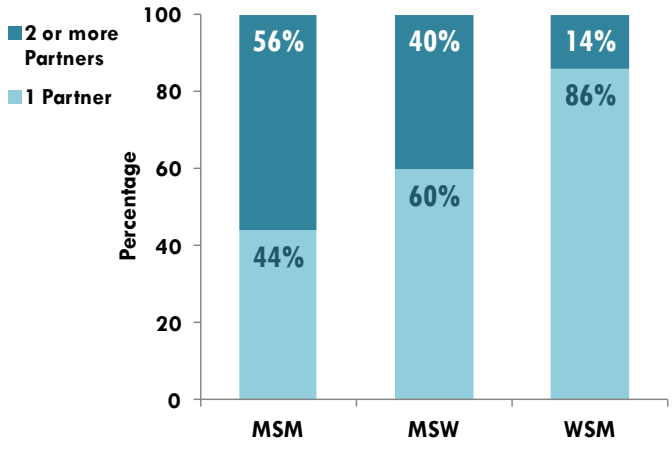
MMP participants reported higher tobacco use than the general Virginia population (CDC, 2011). Statewide in 2009, 51% of males and 36% of females had ever smoked (smoking at least 100 cigarettes), while 63% of male MMP participants and 67% of female participants reported ever smoking. Furthermore, current smoking was higher among MMP participants than all Virginians (46% vs. 19%). As smoking is a risk factor for developing lung cancer, especially within the HIV positive population, tobacco use is of concern (Pakkala, 2010). Also of concern are alcohol and/or illicit substance use, as they may impair adherence with HIV treatment (Sansone, 2008). The 2009 MMP population's alcohol use mirrored that of other Virginians. A lower percentage of participants reported having at least one drink in the last 30 days (42%) than the statewide estimate (52%). Estimates of binge drinking^ among Virginians and MMP participants were similar (13.5% vs. 13%). Fourteen percent of participants indicated that they drank alcohol before or during

sex in the past 12 months. In addition, sixteen percent of participants (n=21) reported using illicit drugs in the year before the interview; all of whom reported using marijuana. Other illicit drug use was reported, but only by very small numbers of participants (n=5). No one reported injecting illicit drugs during the previous 12 months.

SEXUAL BEHAVIORS

Most participants (78%) had zero or one sexual partner during the previous 12 months. The figure below depicts the reported number of sexual partners in the last 12 months among those who had anal or vaginal sex. Of male participants who had anal sex with men in the previous year, 31% indicated that they had did not use a condom. Among men who had vaginal and/or anal sex with women during the year before the interview, none reported having unprotected vaginal or anal sex with women. Forty percent of the female participants who reported having vaginal and/or anal sex with men in the year prior to the interview reported engaging in unprotected vaginal or anal sex with at least one male partner.

Reported Vaginal, Anal or Oral Sex with at Least One Partner† in the Past 12 Months, MMP 2009



SERVICE UTILIZATION AND UNMET NEEDS

Participants most commonly reported that they used the following five HIV-related services: HIV case management (67%), dental care (55%), counseling about how to prevent the spread of HIV and other STDs (47%), ADAP (47%), and public benefits including Supplemental Security Income or Social Security Disability Insurance (43%). The top five HIV-related services that the participants stated they needed but were unable to obtain were: dental care (53%), public benefits (29%), HIV case management (16%), transportation assistance (15%) and HIV peer group support (12%). The top two reasons for not receiving dental care were not knowing where to go or who to call and services costing too much or not having dental insurance. Dental care is particularly important for HIV patients as poor dental hygiene can contribute to medication adherence, psychosocial issues, and nutritional problems. Furthermore, as HIV disease progresses, periodontal disease can become more aggressive (HRSA, 2010).

REFERENCES

CDC (2011). Behavioral Risk Factor Surveillance System Annual Survey Data. Accessed November 2011: http://apps.nccd.cdc.gov/BRFSS/

CDC (2009).Guidelines for Prevention and Treatment of Opportunistic Infections in HIV-Infected Adults and Adolescents. MMWR 2009:58(6-10). Accessed November 2011: http://aidsinfo.nih.gov/contentfiles/Adult_OI_041009.pdf

HRSA, HIV/AIDS Bureau. (January 2011). Guide for HIV/AIDS Clinical Care,. Accessed November 2011: *http://hab.hrsa.gov/deliverhivaidscare/clinicalguide11/cg-00-00.html*

HRSA, HIV/AIDS Bureau. (October 2010). HAB HIV Core Clinical Performance Measures (2008). Accessed November 2011: *http://hab.hrsa.gov/deliverhivaidscare/habperformmeasures.html*

Pakkala S, *et al*. (2010). Lung cancer in HIV-positive patients. *Journal Of Thoracic Oncology*, *5*(11), 1864-1871.

Sansone R, *et al. (*2008) Alcohol/substance misuse and treatment adherence: fatal attraction. *Psychiatry (Edgemont)* 2008. 5(9)43–46.

SAMHSA (2009). National Survey of Drug Use and Health Query. Accessed November 2011: http://as.samhsa.gov/2k9State/WebOnlyTables/stateTabs.htm#Tab103

U.S. DHHS (2011). Guidelines for the use of antiretroviral agents in HIV-1-infected adults and adolescents. Accessed November 2011: http://www.aidsinfo.nih.gov/ContentFiles AdultandAdolescentGL.pdf

^Binge drinking is defined as having 5 drinks for men or 4 or more drinks for women on one occasion in the past 30 days.

†MSM=Men who have sex with men; MSW=Men who have sex with women; WSM=Women who have sex with men. MSM and MSW are not mutually exclusive categories.